

What is claimed is:

1. A pressurized accumulator tank for storing, transporting and dispensing flowable materials comprising a pressure vessel having an outer shell made of a shape retaining material, a perforated anti-collapse supply/discharge tube in said shell, said supply/discharge tube having an inlet opening for receiving the flowable materials, said supply/discharge tubing having an outlet opening for discharging the flowable materials, an expandable flexible bladder mounted around and enclosing said supply/discharge tube over a length which includes the perforations of said supply/discharge tube whereby the flowable materials in said supply/discharge tube may selectively flow from said supply/discharge tube into said bladder to expand said bladder and may flow from said bladder back into said supply/discharge tube when said bladder is contracted, said rigid shell having an inner surface, and a compressed air connection for connection to a source of compressed air mounted for feeding compressed air into said shell between said inner surface and said bladder to cause said bladder to contract and to thereby force the flowable materials in said bladder back into said supply/discharge tube and out of said outlet opening.
2. The tank of claim 1 wherein said inlet opening and said outlet opening are the same to comprise a combined inlet/outlet opening.
3. The tank of claim 1 wherein said supply/discharge tube includes an elbow extension extending laterally below the perforated portion of said supply discharge tube, a product line mounted to and in flow communication with said el-

H-50034

bow extension, and a flow valve selectively opening flow communication between said product line and said elbow extension.

4. The tank of claim 3 wherein said vessel is mounted on a support base.
5. The tank of claim 4 wherein said support base is a pallet type base, said vessel being mounted on a plurality of legs which in turn are mounted on said support base, and said product line and said elbow extension being located between the bottom of said vessel and said support base.
6. The tank of claim 5 wherein said bladder is removably clamped to said supply/discharge tube.
7. The tank of claim 6 wherein said supply/discharge tube is coaxially mounted in said vessel.
8. The tank of claim 7 wherein said supply/discharge tube includes a narrower diameter upper extension connectable to a vacuum source, and a vent valve in said upper extension to selectively close flow communication with said upper extension and supply discharge tube.
9. The tank of claim 8 wherein a support flange is mounted at the upper end of said vessel, an air line mounted to said flange and communicating with said interior of said vessel, and said compressed air connection being mounted to and in flow communication with said air line.

10. The tank of claim 9 wherein said vessel includes a central cylindrical shell and top and bottom ellipsoidal heads mounted to said cylindrical portion of said shell.
11. The tank of claim 10 including a clamp mounting each end of said bladder to said supply/discharge tube at a location outside of said vessel to removably mount said bladder to said supply/discharge tube, a set of two brackets, each of said brackets having a cylindrical wall and an outwardly extending peripheral projection mounted to and externally of said vessel surrounding each of said clamps, one of said brackets being an upper bracket mounted to the upper surface of said vessel, the other of said brackets being a lower bracket mounted to the lower surface of said vessel, a tube flange mounted to and extending around said supply/discharge tube, and said tube flange being detachably secured to said outwardly extending peripheral projection of said lower bracket to detachably mount said supply/discharge tube to said vessel.
12. The tank of claim 11 wherein said support flange is detachably secured to said outwardly extending peripheral projection of said upper bracket.
13. The tank of claim 1 wherein said vessel is mounted on a support base.
14. The tank of claim 13 wherein said support base is a pallet type base, said vessel being mounted on a plurality of legs which in turn are mounted on said

H-50034

support base, and said product line and said elbow extension being located between the bottom of said vessel and said support base.

15. The tank of claim 1 including a clamp mounting each end of said bladder to said supply/discharge tube at a location outside of said vessel to removably mount said bladder to said supply/discharge tube, a set of two brackets, each of said brackets having a cylindrical wall and an outwardly extending peripheral projection mounted to and externally of said vessel surrounding each of said clamps, one of said brackets being an upper bracket mounted to the upper surface of said vessel, the other of said brackets being a lower bracket mounted to the lower surface of said vessel, a tube flange mounted to and extending around said supply/discharge tube, and said tube flange being detachably secured to said outwardly extending peripheral projection of said lower bracket to detachably mount said supply/discharge tube to said vessel.

16. The tank of claim 15 wherein a support flange is mounted at the upper end of said vessel, an air line mounted to said flange and communicating with said interior of said vessel, and said compressed air connection being mounted to and in flow communication with said air line.

17. The tank of claim 16 wherein said support flange is detachably secured to said outwardly extending peripheral projection of said upper bracket.

18. The tank of claim 1 wherein said supply/discharge tube is coaxially mounted in said vessel.

19. The tank of claim 18 wherein said supply/discharge tube includes a narrower diameter upper extension connectable to a vacuum source, and a vent valve in said upper extension to selectively close flow communication with said upper extension and supply discharge tube.
20. A method of filling and discharging a flowable material from an accumulator tank having a supply/discharge tube mounted in a rigid vessel of the accumulator tank, the tube being an anti-collapse perforated tube, an expandable flexible bladder mounted around the supply/discharge tube over the length of the tube having the perforations, an extension of the tube being located outside of the vessel and connected to a product line having a valve to control flow communication between the product line and the tube extension, the vessel being mounted on a base, the filling steps comprising creating flow communication between the product line and the supply/discharge tube, disposing the product line in communication with a source of the flowable material, creating a vacuum in the supply/discharge tube to draw in flowable material through the product line and supply/discharge tube, feeding the incoming flowable material through the perforations of the supply/discharge tube to expand the bladder toward the inner surface of the vessel until a sufficient amount of flowable material has been fed into the vessel, the discharge steps comprising connecting a source of compressed air to an air connection which communicates with the interior of the vessel in a space between the interior of the vessel and the exterior of the bladder, opening communication between the product line and the supply discharge tube, mounting a discharge hose to the product line, feeding compressed air

H-50034

into the space between the interior of the vessel and the outer surface of the bladder to squeeze the bladder so that the bladder contracts to force the flowable material into the supply/discharge tube and out of the supply/discharge tube into the product line, closing communication between the product line and the supply discharge tube, and stopping the flow of compressed air into the vessel when a sufficient amount of flowable material has been discharged.